

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
23 January 2025 (23.01.2025)



(10) International Publication Number
WO 2025/018945 A1

(51) International Patent Classification:

C04B 28/04 (2006.01) *C04B 18/14* (2006.01)
C04B 16/06 (2006.01) *C04B 103/30* (2006.01)
C04B 14/06 (2006.01) *E01C 3/00* (2006.01)
C04B 18/06 (2006.01)

RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:

PCT/SG2024/050468

Published:

— with international search report (Art. 21(3))

(22) International Filing Date:

19 July 2024 (19.07.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202302041P 19 July 2023 (19.07.2023) SG

(71) Applicants: **NANYANG TECHNOLOGICAL UNIVERSITY** [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG). **TUM CREATE LIMITED** [SG/SG]; 1 Create Way, #10-02 CREATE Tower, Singapore 138602 (SG). **JTC CORPORATION** [SG/SG]; 8 Jurong Town Hall Road, The JTC Summit, Singapore 609434 (SG).

(72) Inventors: **YANG, En-Hua**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **BAWONO, Ali Aryo**; c/o TUM CREATE Limited, 1 Create Way, #10-02 CREATE Tower, Singapore 138602 (SG). **LIU, Yiquan**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **LECHNER, Bernhard**; c/o TUM CREATE Limited, 1 Create Way, #10-02 CREATE Tower, Singapore 138602 (SG).

(74) Agent: **VIERING, JENTSCHURA & PARTNER LLP**; P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ,

(54) Title: STRAIN HARDENING CEMENTITIOUS COMPOSITES FOR RIGID PAVEMENT REHABILITATION

(57) Abstract: Herein disclosed is a cementitious formulation comprising: a cement; water; a polymeric fiber; and a water-reducing agent. Herein disclosed also includes a method for forming the cementitious formulation.

WO 2025/018945 A1